

CLAIMS

What is claimed is:

1. A method of measuring frequency interference between a plurality of cell sites in a wireless telecommunications system, the method comprising:

selecting a frequency in a cell site to be used as a beacon frequency;

activating the beacon frequency in the cell site;

recording, at a telecommunications switch, a signal strength of the beacon frequency as measured by a first wireless device operating in the cell site and a signal strength of the beacon frequency as measured by a second wireless device operating in another cell site; and

determining the frequency interference between the cell site and the other cell site based on the signal strengths.

2. The method of claim 1, wherein the cell sites are adjacent cell sites.

3. The method of claim 1, further comprising removing the beacon frequency from availability for use in the system by wireless device users.

4. The method of claim 1, wherein measuring the frequency interference includes constructing a carrier/interference matrix.

5. The method of claim 1, further comprising de-activating the beacon frequency after the signal strengths are recorded.

6. The method of claim 1, wherein selecting a frequency includes selecting a frequency that is a least-used frequency.

7. The method of claim 1, wherein selecting a frequency includes selecting a guard frequency.

8. The method of claim 1, further comprising removing a frequency adjacent the beacon frequency from availability for use in the system by wireless device users.

9. The method of claim 1, further comprising repeating the method for all cell sites in the telecommunications system.

10. The method of claim 1, further comprising adding the beacon frequency to a list of frequencies.

11. The method of claim 10, wherein adding the beacon frequency to a list of frequencies includes adding the beacon frequency to a mobile assisted handoff (MAHO) list in a telecommunications switch.

12. The method of claim 1, further comprising determining whether the cell site and the other cell site may be selected for frequency re-use based on determining the frequency interference.

13. The method of claim 1, further comprising selecting a trigger frequency to simulate a hand-off situation for the second wireless device.

14. A telecommunications system, comprising:

a telecommunications switch for:

selecting a frequency in a cell site to be used as a beacon frequency; and
activating the beacon frequency in the cell site; and

a computer in communication with the switch for determining a frequency interference between the cell site and another cell site based on signal strength data resident on the switch, wherein the signal strength data include a signal strength of the beacon frequency as measured by a first wireless device operating in the cell site and a signal strength of the beacon frequency as measured by a second wireless device operating in the other cell site.

15. The system of claim 14, wherein the switch is further for removing the beacon frequency from availability for use in the system by wireless device users.

16. The system of claim 14, wherein the computer is further for generating a carrier/interference matrix.

17. The system of claim 14, wherein the switch is further for de-activating the beacon frequency.

18. The system of claim 14, wherein the switch is further for selecting a trigger frequency to simulate a hand-off situation for the second wireless device.

19. An apparatus, comprising:

means for selecting a frequency in a cell site to be used as a beacon frequency;

means for activating the beacon frequency in the cell site;

means for recording, at a telecommunications switch, a signal strength of the beacon frequency as measured by a first wireless device operating in the cell site and a signal strength of the beacon frequency as measured by a second wireless device operating in another cell site; and

means for determining the frequency interference between the cell site and the other cell site based on the signal strengths.

20. The apparatus of claim 19, further comprising means for removing the beacon frequency from availability for use in a telecommunications system by wireless device users.

21. The apparatus of claim 19, further comprising means for generating a carrier/interference matrix.

22. The apparatus of claim 19, further comprising means for selecting a trigger frequency to simulate a hand-off situation for the second wireless device.

23. A computer-readable medium having stored thereon instructions which, when executed by a processor, cause the processor to determine a frequency interference between a cell site and another cell site based on a plurality of signal strengths, wherein the signal strengths are measured by:

selecting a frequency in the cell site to be used as a beacon frequency;
activating the beacon frequency in the cell site; and
recording, at a telecommunications switch, a signal strength of the beacon frequency as measured by a first wireless device operating in the cell site and a signal strength of the beacon frequency as measured by a second wireless device operating in the other cell site.

24. The computer-readable medium of claim 23 having stored thereon additional instructions which, when executed by the processor, cause the processor to generate a carrier/interference matrix.

25. The computer-readable medium of claim 23 having stored thereon additional instructions which, when executed by the processor, causes the processor to remove the beacon frequency from availability for use in a telecommunications system by wireless device users.